

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A hybrid structural module comprising:
a pultruded tubular fibre composite member;
a filled resin system ~~comprising an aggregate, wherein the filled resin system is located within the~~ pultruded tubular fibre composite member; and
at least one elongated steel ~~member~~ bar, threaded rod, or tendon (cable)
located within the filled resin system;
wherein the filled resin system binds the steel ~~member~~ bar, threaded rod, or tendon (cable) and pultruded tubular member together.
2. (Canceled)
3. (Currently Amended) The hybrid structural module of claim 2 1 wherein the pultruded member is rectangular or square in transverse cross-section.
4. (Currently Amended) The hybrid structural module of claim 1 wherein an internal void of the pultruded tubular member is square, rectangular or circular.
5. (Currently Amended) The hybrid structural module of claim 1 wherein the pultruded tubular fibre composite member has the majority of its fibres orientated in a longitudinal direction.
6. (Original) The hybrid structural module of claim 1 wherein the resin in the filled resin system is a polyester, vinylester, polyurethane or epoxy resin.
7. (Currently Amended) The hybrid structural module of claim 1 wherein the filled resin system adheres to both the steel bar, threaded rod, or tendon (cable) and the pultruded tubular fibre composite member.
8. (Currently Amended) The hybrid structural module of claim 1 wherein ~~the aggregate~~ a filler of the filled resin system is inert.

9. (Currently Amended) The hybrid structural module of claim 1 wherein ~~the aggregate~~ a filler of the filled resin system has compression strength of between 20MPa and 60Mpa.

10. (Currently Amended) The hybrid structural module of claim 1 wherein the ~~aggregate comprises~~ filled resin system comprises a light aggregate and a heavy aggregate.

11. (Original) The hybrid structural module of claim 10 wherein the light aggregate has a specific gravity less than that of the resin.

12. (Original) The hybrid structural module of claim 10 wherein the light aggregate has a specific gravity of 0.5 to 0.9.

13. (Original) The hybrid structural module of claim 10 wherein the light aggregate makes up 20-25% by volume of the filled resin system.

14. (Original) The hybrid structural module of claim 10 wherein the light aggregate is centre spheres.

15. (Original) The hybrid structural module of claim 14 wherein the centre spheres have a specific gravity of approximately 0.7, a nominal particle size range between 20-300 microns, and compression strength of approximately 40MPa.

16. (Original) The hybrid structural module of claim 10 wherein the light aggregate is hollow glass micro spheres.

17. (Original) The hybrid structural module of claim 10 wherein the heavy aggregate has a specific gravity larger than that of the resin.

18. (Original) The hybrid structural module of claim 10 wherein the heavy aggregate usually makes up 40-60% by volume of the filled resin system.

19. (Original) The hybrid structural module of claim 18 wherein the heavy aggregate is basalt.

20. (Original) The hybrid structural module of claim 19 wherein the basalt has a particle size of between 1 to 7 mm.

21. (Original) The hybrid structural module of claim 19 wherein the basalt makes up to between 40-50% by volume of the filled resin system.

22. (Original) The hybrid structural module of claim 19 wherein the basalt has a specific gravity of approximately 2.8.

23. (Original) The hybrid structural module of claim 10 wherein the resin contains a thixotrope.

24. (Currently Amended) The hybrid structural module of claim 1 ~~wherein the steel member is a~~ comprising a bar, wherein the bar is round or deformed bar, threaded rod, or tendon (cable).

24. (Second Instance of Claim 24 – Cancelled)

25. (Currently Amended) The hybrid structural module of claim 1 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) is plain carbon steel, galvanised steel, or stainless steel.

26. (Currently Amended) The hybrid structural module of claim 1 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) is slighter shorter than the length of the pultruded tubular fibre composite member.

27. (Currently Amended) The hybrid structural module of claim 1 wherein the pultruded tubular member is completely filled with the filled resin system.

28. (Currently Amended) The hybrid structural module of claim 1 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) is totally encompassed by the filled system.

29. (Currently Amended) The hybrid structural module of claim 1 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) extends outwardly from the tubular member and the resin system.

30. (Currently Amended) The hybrid structural module of claim 1 wherein there are multiple steel ~~members~~ bars, threaded rods, or tendons (cables).

31. (Currently Amended) The hybrid structural module of claim 30 wherein the multiple steel ~~members~~ bars, threaded rods, or tendons (cables) are spaced substantially an equal distance away from each other.

32. (Currently Amended) The hybrid structural module of claim 1 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) is prestressed prior to the hybrid ~~member~~ module being formed.

33. (Currently Amended) A method of forming a hybrid structural module, the method including the steps of:

forming a pultruded tubular fibre composite member;

locating at least one longitudinal steel ~~member~~ bar, threaded rod, or tendon (cable) within the pultruded tubular fibre composite member; and

locating a filled resin system ~~comprising an aggregate~~ within the pultruded tubular fibre composite member so the filled resin system binds the steel ~~member~~ bar, threaded rod, or tendon (cable) and pultruded tubular member together.

34. (Currently Amended) The method of claim 33 wherein an internal void of the pultruded tubular fibre composite ~~members of claim 33~~ member is sanded or abraded before the filled resin system is located within the pultruded tubular member.

35. (Currently Amended) The method of claim 33 wherein the steel ~~member~~ bar, threaded rod is

(a) cleaned with a solvent, or

(b) etched, or

(c) cleaned with a solvent and etched

prior to the steel ~~member~~ bar, threaded rod, or tendon (cable) being located within the pultruded tubular member.

36. (Currently Amended) The method of claim 33 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) is lowered into the pultruded tubular fibre composite module and resin is poured into the module to fill the void.

37. (Currently Amended) The method of claim 33 wherein the filled resin is poured into the pultruded tubular fibre composite member, and the steel ~~member~~ bar, threaded rod, or tendon (cable) is lowered into the pultruded tubular fibre composite member.

38. (Currently Amended) The hybrid structural module of claim 1 wherein the steel ~~member~~ bar, threaded rod, or tendon (cable) has a yield strain of approximately 0.25%, and a failure strain in excess of 2%.